IN THE SPECIFICATION:

Please replace the paragraph beginning at page 8, line 24 with the following rewritten paragraph:

In the present specific embodiment, the quarter-wave plate 20 is implemented via a first eighth-wave plate 40 in line with a second eighth-wave plate 42. The eighth-wave plates 40, 42 have circular perforations 44 extending completely therethrough. The dimensions and spacing of the circular perforations 44 are optimized to convert an input horizontally-polarized beam (see beam 18 of Fig. 1) into the circularly-polarized output beam 22 and are optimized to convert the reflected circularly-polarized beam 26 into the vertically-polarized beam 30, which reflects from the beamsplitter 16. The exact dimensions and spacing of the circular perforations 44 are application-specific and may be changed in accordance with properties of the electromagnetic energy for which the isolator 12 will be used. The construction of a suitable quarter-wave plate is also discussed in co-pending U.S. Patent Application, Serial No. 10/231937, entitled VARIABLE QUASIOPTICAL WAVE PLATE AND METHOD OF MAKING (Atty. Docket No. PD02W052), now U.S. Pat. No. 6,693,605, assigned to the assignee of the present invention and incorporated by reference herein. While in the present specific embodiment, the quarter-wave plate 20 is implemented via two eighth-wave plates 40, 42, one skilled in the art may implement the quarter-wave plate as a single plate perforated by an array of rectangular slots.

IN THE CLAIMS:

1. (Currently Amended) A system for selectively blocking electromagnetic energy comprising:

first means for employing a perforated component to pass a beam characterized by a first property and reject a beam characterized by a second property and

second means for selectively altering said beam passed by said first means so that upon reflection from a surface of a load located downstream from said second means, said beam exhibits said second property.

2. (Original) The system of Claim 1 wherein said first property corresponds to a first polarization, and said second property corresponds to a second polarization.

3. (Original) The system of Claim 2 wherein said perforated component includes a beamsplitter having a first perforated metallic plate.

4. (Original) The system of Claim 3 wherein said second means includes a quarter-wave plate having a second perforated metallic plate.

5. (Original) The system of Claim 4 wherein said quarter-wave plate is implemented via two perforated metallic eighth-wave plates.

6. (Original) The system of Claim 4 wherein said beamsplitter and said quarter-wave plate have rectangular, square, elliptical, or circular perforations therethrough.

7. (Original) The system of Claim 6 wherein said beamsplitter is sufficiently angled so that energy reflecting from said beamsplitter is directed away from a source of said beam.

8. (Original) The system of Claim 7 wherein said beamsplitter is angled approximately 45 degrees relative to said beam.

9. (Original) The system of Claim 8 wherein said beam is a quasioptical beam.

10. (Original) The system of Claim 9 wherein said source of said beam is a gyrotron that produces a high-power beam of microwave or millimeter-wave energy.

11. (Original) The system of Claim 4 wherein perforations in said beamsplitter and said quarter-wave plate are spaced in accordance with the following equations for perforation patterns arranged in an isosceles triangle and in a rectangle, respectively:

$$2\frac{\lambda}{d_x} \geq 1+\sin\theta, \quad \frac{\lambda}{d_y} \geq 1+\sin\theta$$

and

$$\frac{\lambda}{d_x} > 1+\sin\theta, \quad \frac{\lambda}{d_y} > 1+\sin\theta,$$

where λ is the wavelength of said beam; θ is the approximate angle of incidence of said beam on said quarter-wave plate or said beamsplitter; d_x represents horizontal distance between perforation centers; and d_y represents vertical distance between perforation centers.

12. (Original) A system for selectively redirecting electromagnetic energy comprising:

first means for changing polarization of said electromagnetic energy from a first polarization to a second polarization and

second means for employing said second polarization to block and/or reflect said electromagnetic energy characterized by said second polarization via one or more perforations.

13. (Original) The system of Claim 12 wherein said first means includes a perforated quarter-wave plate.

14. (Original) The system of Claim 13 wherein said perforated quarter-wave plate is a perforated metallic quarter-wave plate.

15. (Original) The system of Claim 14 wherein said second means includes a perforated metallic beamsplitter.

16. (Original) The system of Claim 15 wherein said electromagnetic energy includes a quasioptical beam.

17. (Original) The system of Claim 16 wherein said quasioptical beam is a high-power microwave beam.

18. (Original) A quasioptical millimeter-wave isolator comprising:

a perforated metallic quarter-wave plate sufficient to change polarization of a quasioptical beam to be blocked and/or redirected from a first polarization to a second polarization and

a perforated metallic beamsplitter sufficient to block and/or reflect said quasioptical beam characterized by said second polarization.

19. (Original) A millimeter-wave source comprising:

first means for generating a quasioptical beam of electromagnetic energy of a first polarization;

second means for transmitting said quasioptical beam through a perforated plate, said perforated plate passing energy of a first polarization and reflecting and/or absorbing energy of a second polarization; and

third means for imparting said second polarization to energy reflected back toward said source so that said second means reflects and/or absorbs said energy reflected back toward said source.

20. (Previously Presented) The source of Claim 19 wherein said third means includes a perforated metallic quarter-wave plate.

21. (Previously Presented) The source of Claim 20 wherein said second means includes a source output window and a perforated metallic beamsplitter.

22. (Currently Amended) A method for selectively blocking electromagnetic energy comprising the steps of:

passing a beam of electromagnetic energy with a perforated component having a first polarization and rejecting electromagnetic energy having a second polarization and

selectively altering said first polarization with a surface of a load so that a beam of electromagnetic energy reflected by said surface exhibits said second polarization before impinging on said perforated component.

23. (Original) The method of Claim 22 wherein said step of selectively altering includes employing a perforated component to selectively alter said first polarization.

24. (Currently Amended) A system for selectively blocking electromagnetic energy comprising:

a perforated metallic beamsplitter adapted to pass a beam characterized by a first property and to reject a beam characterized by a second property and

means for selectively altering said beam passed by said perforated metallic beamsplitter so that upon reflection from a surface of a load located downstream from said means, said beam exhibits said second property.

25. (Original) The system of Claim 24 wherein said metallic beamsplitter is a perforated metallic beamsplitter, and wherein said means for selectively altering a beam is a perforated metallic quarter-wave plate.

26. (Currently Amended) A system for selectively blocking electromagnetic energy comprising:

first means for employing a perforated component to pass a beam characterized by a first property and reject a beam characterized by a second property and

a metallic quarter-wave plate adapted to selectively alter said beam passed by said first means so that upon reflection from a surface of a load located downstream from said plate, said beam exhibits said second property.

27. (Original) The system of Claim 24 wherein said metallic quarter-wave plate is perforated, and wherein said first means includes a perforated metallic beamsplitter.

28. (Currently Amended) A system for selectively blocking electromagnetic energy comprising:

a metallic beamsplitter adapted to pass a beam characterized by a first property and to reject a beam characterized by a second property and

a metallic quarter-wave plate adapted to selectively alter said beam passed by said metallic beamsplitter so that upon reflection from a surface of a load located downstream from said second means, said beam exhibits said second property.

29. (Original) The system of Claim 28 wherein said metallic beamsplitter and/or said metallic quarter-wave plate include perforations therein.